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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,921	03/18/2004	David J. Lee	05165.1400	5426
66060 7590 10/02/2007 BAKER & HOSTETLER, LLP FOR BOEING COMPANY WASHINGTON SQUARE, SUITE 1100 1050 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			EXAMINER OCHOA, JUAN CARLOS	
			ART UNIT 2123	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,921

Applicant(s)

LEE ET AL.

Examiner

Juan C. Ochoa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 7/12/07 has been received and considered. Claims 1-73 are presented for examination.

Claim Interpretation

2. Office personnel are to give claims their "broadest reasonable interpretation" in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541,550-551(CCPA 1969). See *also In re Zletz, 893 F.2d 319,321-22, 13 USPQ2d 1320, 1322(Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow").... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.

Claim Objections

3. Claim 71 is objected to because of the following informalities:
4. Claim 71 line 1 includes the misspelled term "othe". Examiner interprets as "other" for examination purposes.

5. Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 27–34 and 61–68 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. Specifically, claims 27 and 61 do not produce a useful, concrete and tangible result. Claims 27 and 61 are not actually doing anything; they are just capable of imparting functionality.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 10–14, 18–23, 27–31, and 44–48 are rejected under 35 U.S.C. 102(e) as being anticipated by Noma et al. (Noma hereinafter), Pre-Grant publication 20040010398. (See PTO-892 Notice of Reference Cited dated 3/12/07).

11. As to claim 10, Noma discloses a computer-implemented method (see paragraph [0001]) for designing an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) storing a digital definition of the interior section of the passenger vehicle and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) displaying a visual model of the interior section of the passenger vehicle (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) receiving user input from a user reflecting a first change to the interior section of the passenger vehicle (see paragraph [0075], next to last line); d) determining in response to the user input and said digital definition and said parameters whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206]), and e) executing the second change to the interior section of the passenger vehicle by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

12. As to claim 44, Noma discloses a computer-implemented method for designing a configurable space to accommodate objects for the configurable space (see paragraph [0005], lines 9–16), comprising a) storing a digital definition of the configurable space

and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) displaying a visual model of the configurable space (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) receiving user input from a user reflecting a first change to the configurable space (see paragraph [0075], next to last line); d) determining in response to the user input and said digital definition and said parameters whether a second change to the configurable space is necessary because of the first change to the configurable space (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206]); and e) executing the second change to the configurable space by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

13. As to claims 11 and 45 Noma discloses a method wherein said digital definition comprises a plurality of data objects representing different aspects of the interior/configurable space (see paragraphs [0092]–[0094] and [0203]).

14. As to claims 12 and 46 Noma discloses a method wherein a first one of said data objects contains information regarding a second data object representing an aspect of the interior/configurable space that has a relationship with an aspect of the interior/configurable space represented by said first data object (see “determining the horizontal position of the driver's hip point HP1” in paragraphs [0155] and [0156]).

15. As to claims 13 and 47 Noma discloses a method wherein said processor is capable of modifying said second data object in response to a change made by the system to said first data object, and said processor uses said information regarding said second data object to determine whether said second data object should be modified (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206] and paragraph [0313]).

16. As to claims 14 and 48 Noma discloses a method wherein each of said data objects has one of a plurality of types, and a first of said types represents a first portion of the vehicle/configurable space that is fully contained within a second portion of the vehicle/configurable space represented by a second of said types (see paragraphs [0317] and [0318]).

17. As to claims 18–22, these claims recite a computer-implemented system which performs the method of claims 10–14. Noma discloses an apparatus (see paragraph [0001]) which performs the method anticipated by claims 10–14. Therefore, claims 18–22 are rejected for the same reasons given above.

18. As to claim 23, Noma discloses responding to a change to a data object having said first type and said processor is capable of responding to a change to a data object having said second type (see paragraphs [0317] and [0318]).

19. As to claims 27–31, these claims recite a computer-readable medium having computer-executable instructions for performing a method performed by the method of claims 10–14. Noma discloses a program (see paragraph [0001]) which performs the

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method that anticipates claims 10–14. Therefore, claims 27–31 are rejected for the same reasons given above.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

23. Claims 1–7, 15, 24, 32, 35–41, 49, 52–58, 61–66, 69, and 71–73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noma as applied to claim 44 above, taken in view of Lohmann et al., (Lohmann hereinafter), Pre–Grant publication 20020026296. (See PTO-892 Notice of Reference Cited dated 3/12/07).

24. As to claim 1, Noma discloses a computer-implemented system for designing an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) a database comprising a digital definition of the interior section of the passenger vehicle and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) a computer-aided design system configured to display a visual model of the interior section of the passenger vehicle (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) a user interface capable of receiving user input from a user reflecting a first change to the interior section of the passenger vehicle (see paragraph [0075], next to last line); d) a processor responsive to the user input by using said digital definition and said parameters to (i) determine whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206]),

and (ii) execute the second change to the interior section of the passenger vehicle by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

25. While Noma discloses determining whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute the second change to the interior section of the passenger vehicle by updating said digital definition, Noma fails to disclose determining **automatically** whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute **automatically** the second change to the interior section of the passenger vehicle by updating said digital definition.

26. Lohmann discloses determining **automatically** whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute **automatically** the second change to the interior section of the passenger vehicle by updating said digital definition (see paragraph [0032]).

27. Noma and Lohmann are analogous art because they are both related to arrangement of passenger seats in an airplane/vehicle.

28. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to utilize the feature of Lohmann in the system of Noma because Lohmann develops a method whereby production documents (such as drawings, parts lists, supplementing or completing evaluations, e.g. device and equipment lists or mass distribution plans) are automatically prepared (see paragraph

[0008]), and as a result, Lohmann reports the following improvements over his prior art: automatically define the spatial arrangement of structural components relative to each other, and the optimization thereof with respect to their functional positions (for example the visibility and/or reachability of components that must be accessed by passengers) and/or with respect to regulations and other requirements limiting the allowable arrangements, and/or with respect to the quantity or number of the components, i.e. an automated method in which the constantly repeated special knowledge of the designer and builder of a component arrangement (such as an aircraft cabin) is formulated as a system of data and rules, which is then documented and can be repeatedly called-up and applied as needed in an automated manner for repetitious similar applications or other applications that share similar components, restrictions, and the like (see paragraph [0032]).

29. As to claim 35, Noma discloses a computer-implemented system for designing a configurable space to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) a database comprising a digital definition of the interior section of the passenger vehicle and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) a computer-aided design system configured to display a visual model of the interior section of the passenger vehicle (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) a user interface capable of receiving user input from a user reflecting a first change to the

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interior section of the passenger vehicle (see paragraph [0075], next to last line); d) a processor responsive to the user input by using said digital definition and said parameters to (i) determine whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle (see "the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command" in paragraph [0206]), and (ii) execute the second change to the interior section of the passenger vehicle by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17). While Noma discloses determine whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute the second change to the interior section of the passenger vehicle by updating said digital definition, Noma fails to disclose determining **automatically** whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute **automatically** the second change to the interior section of the passenger vehicle by updating said digital definition. Lohmann discloses determining **automatically** whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle and execute **automatically** the second change to the interior section of the passenger vehicle by updating said digital definition (see paragraph [0032]).

30. As to claim 52, Noma discloses a computer-implemented system for designing a configurable space to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) means for storing a digital definition of the configurable space and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) means for displaying a visual model of the configurable space (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) means for receiving user input from a user reflecting a first change to the configurable space (see paragraph [0075], next to last line); d) means for determining in response to the user input and said digital definition whether a second change to the configurable space is necessary because of the first change to the configurable space (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206]) and e) means for executing the second change to the configurable space by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17). While Noma discloses determining in response to the user input and said digital definition whether a second change to the configurable space is necessary because of the first change to the configurable space and executing the second change to the configurable space by updating said digital definition, Noma fails to disclose determining **automatically** in response to the user input and said digital definition whether a second change to the configurable space is necessary because of

the first change to the configurable space and **automatically** executing the second change to the configurable space by updating said digital definition. Lohmann discloses determining **automatically** in response to the user input and said digital definition whether a second change to the configurable space is necessary because of the first change to the configurable space and **automatically** executing the second change to the configurable space by updating said digital definition (see paragraph [0032]).

31. As to claim 61, Noma discloses a computer-readable medium comprising code capable of instructing a computer to perform a method for designing a configurable space to accommodate objects for the configurable space (see paragraph [0005], lines 9–16), said method comprising the steps of: a) storing a digital definition of the configurable space and parameters related to the objects (see paragraphs [0092]–[0094] and [0203]); b) displaying a visual model of the configurable space (see paragraph [0075], last line and “FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65” in paragraph [0079]); c) receiving user input from a user reflecting a first change to the configurable space (see paragraph [0075], next to last line); d) determining in response to the user input and said digital definition and parameters whether a second change to the configurable space is necessary because of the first change to the configurable space (see “the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command” in paragraph [0206]) and e) executing the second change to the configurable

space by updating said digital definition. (See Fig. 26, item Nos. S14, S15, and S17).

While Noma discloses determining in response to the user input and said digital definition and parameters whether a second change to the configurable space is necessary because of the first change to the configurable space and executing the second change to the configurable space by updating said digital definition, Noma fails to disclose **automatically** determining in response to the user input and said digital definition and parameters whether a second change to the configurable space is necessary because of the first change to the configurable space and **automatically** executing the second change to the configurable space by updating said digital definition. Lohmann discloses **automatically** determining in response to the user input and said digital definition and parameters whether a second change to the configurable space is necessary because of the first change to the configurable space and **automatically** executing the second change to the configurable space by updating said digital definition (see paragraph [0032]).

32. As to claims 2, 36, 53, and 62, Noma discloses a system wherein said digital definition comprises a plurality of data objects representing different aspects of the interior/configurable space (see paragraphs [0092]–[0094] and [0203]).

33. As to claims 3, 37, 54, and 63, Noma discloses a system wherein a first one of said data objects contains information regarding a second data object representing an aspect of the interior/configurable space that has a relationship with an aspect of the interior/configurable space represented by said first data object (see “determining the horizontal position of the driver's hip point HP1” in paragraphs [0155] and [0156]).

34. As to claims 4, 38, 55, and 64, Noma discloses a system wherein said processor is capable of modifying said second data object in response to a change made by the system to said first data object, and said processor uses said information regarding said second data object to determine whether said second data object should be modified (see "the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command" in paragraph [0206] and paragraph [0313]).

35. As to claims 5, 39, 56, and 65, Noma discloses a system wherein each of said data objects has one of a plurality of types, and a first of said types represents a first portion of the vehicle/configurable space that is fully contained within a second portion of the vehicle/configurable space represented by a second of said types (see paragraphs [0317] and [0318]).

36. As to claims 6, 40, and 57, Noma discloses a system wherein said processor is capable of responding to a change to a data object having said first type and said processor is capable of responding to a change to a data object having said second type (see paragraphs [0317] and [0318]).

37. As to claims 7, 41, 58, and 66, Lohmann discloses a system further comprising a means for exporting a portion of the contents of said database in a format that can be used with/by a computer-aided design system different from said computer aided design system of said system (see "the database 18 contains all data or parameters necessary for completely describing or defining all relevant cabin components and installations for a prescribed project, on which all of the modules are working concurrently or in

common" paragraph [0030], lines 1–14 and "This solution proposal, which has been modified as necessary, is further coupled to a computer aided design (CAD) system 20 through a plot script which is not illustrated, i.e. the solution proposal is transferred to a parallel operating CAD system 20, where it is displayed and then output as a substantially conventional drawing. The parts lists 24 and the production contracts 25 are also output and transferred through respective defined interfaces automatically into the available parts list system 21 and the production planning system 22" in paragraph [0031]).

38. As to claims 15, 24, and 32, these claims recite a method and a computer-readable medium comprising code capable of instructing a computer to perform a method performed by the system of claim 7. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claim 7. Therefore, claims 15, 24, and 32 are rejected for the same reasons given above.

39. As to claim 49, this claim recites a method performed by the system of claim 41. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claim 41. Therefore, claim 49 is rejected for the same reasons given above.

40. As to claim 69, Lohmann discloses a system further comprised of the passenger vehicle being an airplane. (See paragraph [0001], lines 7–9).

41. As to claim 71, Lohmann discloses a system further comprising of saving the relationship of other objects including seats and other objects including monuments in the database (see paragraph [0030]).

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42. As to claim 72, Lohmann discloses a system further comprising of an object placing sequence including every object in the system having a zone that defines the boundaries within which it can be placed, accommodating full automation (see paragraph [0032]).

43. As to claim 73, Lohmann discloses a method further comprising of fully automating the arranging of interior objects while checking clearances and certification requirements for the entire interior whenever a change is made (see paragraph [0032]).

44. Claims 8, 9, 16, 17, 25, 26, 33, 34, 42, 43, 50, 51, 59, 60, 67, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noma taken in view of Lohmann as applied to claims 1, 10, 18, 27, 35, 44, 52, and 61 above, and further in view of Robert Brauer, (Brauer hereinafter), U.S. Patent 5,611,503. (See PTO-892 Notice of Reference Cited dated 3/12/07).

45. As to claims 8, 42, 59, and 67, while the Noma–Lohmann system designs an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle, the Noma–Lohmann system lacks determining the maximum number of seats that can fit in a section of the interior/configurable space.

46. Brauer discloses a system further comprising a means for determining the maximum number of seats that can fit in a section of the interior/configurable space, based on said parameters and the location of other objects in the interior (see claim 13).

47. Noma, Lohmann, and Brauer are analogous art because they are related to arrangement of passenger seats in an airplane/vehicle.

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48. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to utilize the determination of maximum number of seats of Brauer in the Noma–Lohmann system because Brauer develops a method for increasing passenger seating comfort at typical load factors, relative to that achieved using his prior art with seats of substantially equal dimensions and in an airplane of fixed dimensions with a fixed number of seats (see col. 2, lines 18–26), and as a result, Brauer reports the following improvements over his prior art: producing seating configurations fully compliant with applicable FAA regulations, and seating arrangements which are more comfortable for passengers in an airplane of fixed dimensions and seat type at typical load factors because more passengers are seated next to an empty seat (see col. 16, line 64 to col. 17, line 4).

49. As to claims 9, 43, 60, and 68 Brauer discloses a system further comprising a means for determining a course of action that, if taken, will allow the addition of one extra row of seats, while maintaining compliance with said parameters (see claim 13).

50. As to claims 16, 17, 25, 26, 33, and 34, these claims recite a method and a computer-readable medium comprising code capable of instructing a computer to perform a method performed by the system of claims 8 and 9. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claims 1–5. Therefore, claims 16, 17, 25, 26, 33, and 34 are rejected for the same reasons given above.

51. As to claims 50 and 51, these claims recite a method performed by the system of claims 42 and 43. Noma discloses a method (see paragraph [0001]) performed by the

system that teaches claims 42 and 43. Therefore, claims 50 and 51 are rejected for the same reasons given above.

52. Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noma taken in view of Lohmann as applied to claim 7 above, and further in view of Weber et al., (Weber hereinafter), U.S. Patent 6,113,644. (See PTO-892 Notice of Reference Cited dated 3/12/07).

53. As to claim 70, while the Noma-Lohmann system designs an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle, the Noma-Lohmann system lacks zones being arranged in a hierarchy wherein each zone represents a smaller portion of the vehicle, and there is at least one or more smaller zones inside a larger zone.

54. Weber discloses a system further comprising of a means for zones being arranged in a hierarchy wherein each zone represents a smaller portion of the vehicle, and there is at least one or more smaller zones inside a larger zone (see col. 6, lines 10-21).

55. Noma, Lohmann, and Weber are analogous art because they are related to arrangement of passenger seats in an airplane/vehicle.

56. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to utilize the zones of Weber in the Noma-Lohmann system because Weber develops occupant reach based computer aided automotive vehicle design (see col. 1, lines 7-8), and as a result, Weber reports the following improvements over his prior art: allowing a vehicle designer to determine occupant

reach interaction between computer electronic representations of the occupant and the vehicle, or systems on the vehicle and to conduct human factors ergonomic reach studies for both right and left hand drive vehicles (see col. 12, lines 48–58).

Response to Arguments

57. Applicant's arguments filed 7/12/07 have been fully considered, but they are not persuasive.

58. Regarding the rejections under 101, claims remain defective.

59. Regarding the rejection under 102 and 103. Applicant's arguments have been considered, but they are not persuasive.

60. Applicant argues, (see page 18, 1st paragraph), that Noma fails to teach "a digital definition or a database that has digital definitions of the interior section and the parameters related to the objects". See Noma paragraphs [0092]–[0094] and [0203]. Examiner has further elaborated such disclosures in the instant rejection.

61. Applicant argues, (see page 18, 2nd and 3rd paragraphs), that Noma fails to teach "a computer-implemented system configured to display a visual model of the interior section of the passenger vehicle". See Noma "FIG. 3 shows a display screen example when a reference model built by the reference model building program 62 is displayed on the display unit 17 by the display program 65" in paragraph [0079]. Examiner has further elaborated such disclosures in the instant rejection.

62. Applicant argues, (see page 18, 4th paragraph to page 19, 1st paragraph), that Noma fails to teach "automatically making the change and automatically determining

whether the change is necessary". See Lohmann paragraph [0032]. Examiner has further elaborated such disclosures in the instant rejection.

63. Applicant argues, (see page 19, 2nd and 3rd paragraphs), that Noma fails to teach "determining whether a second change to the interior is necessary, and whether to execute the second change to the interior section by updating the digital definition" and "the interrelationship of the first and second change". See Noma "the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command" in paragraph [0206].

64. Applicant argues, (see page 19, next to last paragraph to page 20, 1st paragraph), that Noma fails to teach "data aspects which represent the interior configurable space and there is no relationship between the two data objects being disclosed". See Noma "determining the horizontal position of the driver's hip point HP1" in paragraphs [0155] and [0156].

65. Applicant argues, (see page 20, 2nd and 3rd paragraphs), that Noma fails to teach "the relationship between a first and second object, especially where the system modifies the second data object based on the change to first data object". See "the program receives user's inputs using the pointing device, determines a portion and its deformation contents designated by an input command, and changes coordinate data in accordance with the command" in paragraph [0206] and paragraph [0313].

66. Applicant argues, (see page 23, 4th paragraph to page 24, 1st paragraph), that Lohmann fails to teach "exporting a portion of the database in a format for a different

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computer system". See Lohmann "the database 18 contains all data or parameters necessary for completely describing or defining all relevant cabin components and installations for a prescribed project, on which all of the modules are working concurrently or in common" paragraph [0030], lines 1-14 and "This solution proposal, which has been modified as necessary, is further coupled to a computer aided design (CAD) system 20 through a plot script which is not illustrated, i.e. the solution proposal is transferred to a parallel operating CAD system 20, where it is displayed and then output as a substantially conventional drawing. The parts lists 24 and the production contracts 25 are also output and transferred through respective defined interfaces automatically into the available parts list system 21 and the production planning system 22" in paragraph [0031].

67. Examiner stated at the end of the rejection that specific figures, columns and lines should not be considered limiting to reference in any way.

68. Taking the entire references the Examiner contends that the art supports the rejection of the claims and the rejection is maintained.

Conclusion

69. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

70. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

71. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

72. Pre-Grant publication 20020161563 Elabiad et al. teaches a vehicle configurator for configuring the interior of a vehicle characterized by a vehicle type and a database storing a plurality of predetermined validation criteria (see paragraph [0025]). (See PTO-892 Notice of Reference Cited dated 3/12/07).

73. Pre-Grant publication 20030018454 Winkler et al. teaches and interface configured to accept from a user changes to the environment design and body models and a processor further configured to modify the design and the body models in accordance with the user changes (see page 1, col. 2, 1st paragraph). (See PTO-892 Notice of Reference Cited dated 3/12/07).

74. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

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75. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.

76. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

77. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP 9/27/07


PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER